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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/270,733	03/16/1999	DAVID MACDONALD DELANEY	10346RO	2879

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EXAMINER

HARPER, KEVIN C

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 09/10/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/270,733

Applicant(s)

DELANEY ET AL

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 and 45-50 is/are rejected.
- 7) ☒ Claim(s) 33-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-18, 21-32 and 45-50 rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. (US 5,862,338).

1. Regarding claims 1-2, 4-5, 11-12, 14-15, 21-22, 24-25 and 45-50, Walker discloses a method of routing packets through a communications network having several sets of virtual ports (Figures 1 and 2; col. 59, lines 8-10), where a distinct broadcast address is assigned to each set of virtual ports (col. 63, lines 15-18; col. 51, lines 35-39). Each packet is assigned an egress address (Figure 13, steps 1305, 1312, 1320 and 1322; col. 61, lines 49-58) when a correspondence between an egress address and a destination address is known or assigned a broadcast address when no correspondence between the destination address and an egress address is known (col. 61, lines 55-57 and col. 63, lines 14-23). The packets are routed to the

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egress address according to the set of virtual ports (Figure 12B, step 1268; Figure 9C and col. 51, lines 35-40). However, Walker does not disclose that no virtual port belongs to more than one of the distinct sets. One skilled in the art would recognize that VLANs, VNETs or VPNs preferably do not have overlapping group members in order to provide security by logically separating the subscriber-based groups. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have distinct group members in the invention of Walker as a matter of design choice. Further, Walker does not disclose that the packet is routed back to the ingress port (col. 58, line 65 through col. 59, line 10). One skilled in the art would recognize that a multicast or broadcast packet is delivered back to a source either as a convenience or that the source may determine which packets have been transmitted correctly. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to transfer a broadcast or multicast packet back to the ingress port in the invention of Walker as a matter of design choice. Further regarding claims 11-12 and 14-15, the network comprises a router (Figure 2, item 210; col. 7, lines 29-30)

2. Regarding claims 3, 13 and 23, the packet is routed to the set of virtual ports except for the ingress port (col. 58, line 65 through col. 59, line 10).

3. Regarding claims 7, 17 and 27, Walker does not disclose adding to each packet the egress address assigned to the packet and removing the egress address at the virtual port. One skilled in the art would recognize that switches typically use a temporary internal header for processing the packets within the switch (i.e. route to a destination port, queue by priority, schedule according to time or bandwidth, etc.), and once the packet is routed to a destination port, the internal header is removed. Therefore, it would have been obvious to one skilled in the

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art at the time the invention was made to use an internal header in the invention of Walker as a matter of design choice

4. Regarding claims 6, 8, 16, 18, 26, 28 and 32, an address table (Figure 9C) is based on source and destination MAC addresses as well as virtual ports (Figure 12, steps 1218, 1222, 1242 and 1250; col. 63, lines 14-23).

5. Regarding claims 9-10 and 29-30, the packets are routed to network trunks (Figure 2, items 202).

6. Regarding claim 31, the network is Ethernet-based (col. 7, line 30).

Claims 19-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Walker et al. as applied to claim 11 above, and further in view of Yuasa et al. (US 6,085,238).

7. Regarding claims 19-20, Walker does not disclose that the trunks interconnect the routers (Figure 2, item 210) of the network. However, Yuasa discloses that trunks interconnect the routers of the network (Figure 4col. 21, lines 52-65). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to interconnect routers with trunks in the invention of Walker in view of Yuasa in order to provide connectivity among VLAN members that do not have a close enough proximity to be connected to the same switch or node.

Allowable Subject Matter

8. Claims 33-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dobbins et al. (US 5,684,800) discloses a network having VLAN capabilities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139. The examiner can normally be reached weekdays, except Wednesday, from 9:30 AM to 8:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin, can be reached at 703-305-4366. The fax number for Technology Center (TC) 2600 is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office for TC 2600 at 703-306-0377.

Kevin C. Harper



September 9, 2002

**KWANG BIN YAO
PRIMARY EXAMINER**

